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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/543,149

07/25/2005

Daniel Monceau

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2618

466

7590

11/02/2006

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EXAMINER

JAGAN, MIRELLYS

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/543,149

Applicant(s)

MONCEAU ET AL.

Examiner

Mirellys Jagan

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 39-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 46-72 is/are allowed.
- 6) ☒ Claim(s) 39-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/25/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

The specification is missing appropriate section headings, as provided in 37 CFR 1.77(b).

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,165,792 to Crowe et al [hereinafter Crowe] in view of U.S. Patent 6,903,281 to Dalmia et al [hereinafter Dalmia].

Crowe discloses a method for thermogravimetrically testing the behavior of a solid material in the presence of a controlled gaseous atmosphere, wherein:

a plurality of samples are placed in the presence of said gaseous atmosphere inside the same controlled atmosphere furnace; and

wherein each sample has its own associated balance for weighing the sample; the samples are subjected to successive predetermined thermal cycles each comprising a heating step, during which the samples are heated directly, and a cooling step, during which the samples are not heated; the weight of each sample is measured and recorded independently in a continuous manner at least during a high-temperature stage of the heating step of each thermo-cycle; in each thermal cycle the samples are heated so that their temperature is from 400°C to 1800°C and their temperature is greater than 1100°C (1600°C) at least during a high-temperature stage of the heating step; in each thermal cycle the samples are heated at a rate of 100°C/minute; the samples are cooled at a rate of 100°C/minute; and the thermal cycles comprise a heating step consisting of a phase of rise in temperature having a duration of about 5 minutes, a high-temperature stage having a duration of the order of 37 minutes, a cooling step consisting of a phase of fall in temperature and a low-temperature stage (reaches room temperature) (see column 1, lines 25-34; column 3, lines 43-55; column 7, lines 9-18 and 40-46; column 11, lines 9-16 and 34-43; column 12, lines 61-65; and column 13, line 55-column 15, line 15).

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Crowe does not disclose each balance having an error of less than 100 micrograms; the samples being heated at a rate of heating greater than 300°C/minute; in each thermal cycle the samples being cooled at a rate of cooling greater than 100°C/minute; the thermal cycles comprising a heating step consisting of a phase of rise in temperature having a duration of less than 5 minutes and a high-temperature stage having a duration of the order of 60 minutes, and a cooling step consisting of a phase of fall in temperature having a duration of less than 10 minutes and a low-temperature stage having a duration of from 0 to 15 minutes; and the samples are subjected to a number of successive thermal cycles of from 0 to 3000.

Dalma discloses a thermogravimetric apparatus having a balance with an error of less than 100 micrograms. Dalma teaches that it is beneficial to use a balance having a low error in order to obtain more accurate measurements of the sample's weight (see column 4, lines 45-63).

Referring to claim 39, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Crowe by using a balance having the claimed error, as taught by Dalmia, in order to obtain more accurate measurements of the sample weight.

Furthermore, referring to claims 42-45, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method of Crowe and Dalmia by providing a rate of heating greater than 300°C/minute, a rate of cooling greater than 100°C/minute, the claimed thermal cycle durations, and the claimed number of cycles, since it has been held that, where the general conditions of a claim are disclosed in the prior art, i.e., raising to and lowering from a high temperature range, performing a each phase of the thermal cycle for a duration of time, and performing plural successive thermal cycles, as taught by

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Crowe, discovering the “optimum range” involves only routine skill in the art. See *In re Aller*, 105 USPQ 233 (CCPA 1995).

***Allowable Subject Matter***

5. Claims 46-72 are allowed.

6. The following is an examiner’s statement of reasons for allowance:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

A device for thermogravimetrically testing the behavior of a solid material in the presence of a controlled gaseous atmosphere, wherein the weighing means comprise N independent balances, each balance being capable of measuring and recording the weight of a sample continuously at least during a high-temperature stage of the heating step of each thermal cycle; and the balances are arranged in the shape of a star suitable for receiving the samples close to one another in a central portion of the furnace (see claim 46).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references disclose a thermogravimetric apparatus:


U.S Patent 5,215,377 to Sugano  
U.S Patent 5,306,087 to Nakamura et al  
U.S Patent 4,606,649 to Mikhail  
U.S Patent Application Publication 2004/0173142 to Willis  
U.S Patent Application Publication 2005/0018746 to Reader, Jr. et al

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJ  
October 23, 2006

  
**Mirellys Jagan**  
**Patent Examiner**  
**Technology Center 2800**